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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Frederic Ferrier

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EXAMINER

SCHLENTZ, NATHAN W

ART UNIT

PAPER NUMBER

1616

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DELIVERY MODE

10/28/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/552,833	Applicant(s) FERRIER ET AL.	
	Examiner Nathan W. Schlientz	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 19-25 and 27-32 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 and 19-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Claims 1-14 and 19-25 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 4 August 2010.

Applicant's election with traverse of Group II, newly added claims 27-32, in the reply filed on 4 August 2010 is acknowledged. The traversal is on the ground(s) that the claims as amended do not lack unity of invention since claims 27-32 are drawn to a product, claims 1-14 and 20-25 recite a process for making the product of claim 27, and claim 19 recites a process for the use of the product of claim 27. This is not found persuasive because the technical feature that is common to all the claims is the Bordeaux mixture. US 5,958,438 teaches a composition comprising brochantite and/or antlerite in a Bordeaux mixture in combination with at least one synthetic fungicide wherein the copper content is between 15-17 wt.% (Examples 5, 7, 8 and 11), which anticipates instant claim 28 that comprises a Bordeaux mixture comprising brochantite or antlerite and a synthetic fungicide, wherein the copper content is between 15% and 40% by weight. Therefore, the feature common to all the claims is not a special technical feature.

The requirement is still deemed proper and is therefore made FINAL.

Status of the Claims

Claims 1-14, 19-25 and 27-32 are pending in the present application. However, as noted above, claims 1-14 and 19-25 are withdrawn as being drawn to non-elected subject matter. Therefore, claims 27-32 are examined herein on the merits for patentability. No claim is allowed at this time.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 13 October 2005 was filed before the mailing date of a non-final Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the IDS has been considered by the examiner. The IDS contains document A2 which lists US 5,985,438 as the patent document and Courtade as the inventor. However, US 5,985,438 by Watanabe is drawn to a reinforcing tape and is not related to the instant invention. It is believed that applicant's intended to list US 5,958,438 as the patent document which is by Courtade et al. and is related to Bordeaux mixtures. Therefore, the examiner has annotated the IDS at document A2 so that it lists US 5,958,438. Also, the IDS contains document C1 which does not have a publication date. See 37 CFR 1.98. Therefore, the examiner has lined through this listing.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 28 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Courtade et al. (US 5,958,438).

Courtade et al. disclose a Bordeaux mixture in the form of an aqueous suspension or dry mixture in which virtually all of the copper is in the form of brochantite (Abstract; col. 2, ln. 25-31). Courtade et al. further disclose a combination of their Bordeaux mixture with at least one synthetic fungicide, such as mancozebe, zinebe, folpel, manebe, and cymoxanil (col. 2, ln. 32-52; and Examples). Courtade et al. further disclose Examples of their Bordeaux mixture in combination with synthetic fungicides wherein the copper content is 15-17 wt.% (Examples 5, 7, 8 and 11). Therefore, Courtade et al. disclose a cupric fungicidal composition comprising a Bordeaux mixture comprising brochantite and a synthetic fungicide wherein the copper content is 15-17 wt.%.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1,148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferrier et al. (US 6,562,757).

Determination of the scope and content of the prior art

(MPEP 2141.01)

Ferrier et al. teach a Bordeaux mixture comprising brochantite and gypsum and containing 26.5 wt.% copper which is obtained by reacting copper sulfate with calcium hydroxide at 50 °C followed by drying, wherein the Bordeaux mixture is then formulated into a wettable powder (Examples 3-5). Ferrier et al. also teach copper hydroxide and calcium citrate formulated into a wettable powder comprising 40 wt.% copper (Example 6); as well as copper oxychloride and calcium citrate formulated as an aqueous suspension concentrate comprising 250 g/liter of copper (Example 7). Ferrier et al. teach addition of a synthetic fungicide to the copper-containing plant protection compositions (col. 4, ln. 11-34; and Claim 16).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

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Ferrier et al. do not explicitly disclose a composition comprising a Bordeaux mixture containing brochantite and/or antlerite, wherein the composition comprises 30-45 wt.% copper. However, Ferrier et al. teach Bordeaux mixtures (26 wt.% copper), copper hydroxide formulations (62 wt.% copper) and copper oxychloride formulations (57 wt.% copper) that result in differing amounts of soluble copper over time (Example 9). Ferrier et al. teach the desire to obtain gradual release of copper from cupric fungicide compositions (col. 2, ln. 63-67). Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art to combine the Bordeaux mixture with copper hydroxide and/or copper oxychloride formulations in order to obtain differing rates of release of the fungicidal copper.

Finding of *prima facie* obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art at the time of the invention to combine the Bordeaux mixture with copper hydroxide and/or copper oxychloride formulations such that the amount of copper is greater than 26.5 wt.% (Bordeaux mixtures of Examples 3-5) but less than 62 wt.% (copper hydroxide of Example 9) in order to obtain differing rates of release of the fungicidal copper. This would afford maximum effectiveness with lower doses of copper per hectare, while not exhibiting the risk of phytotoxicity or while reducing the effectiveness (col. 2, ln. 49-55).

Such would have been obvious in the absence of evidence to the contrary because it is generally *prima facie* obvious to use in combination two or more

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ingredients that have previously been used separately for the same purpose to form a third composition useful for that same purpose. The idea of combining them flows logically from their having been taught individually in the prior art. *In re Kerkhoven* 626 F.2d 646, 850, 205 USPQ 1069, 1072 (CCPA 1980).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been prima facie obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

3. Claims 27-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Barker (US 3,725,535) in view of Courtade et al. (US 5,958,438).

Determination of the scope and content of the prior art

(MPEP 2141.01)

Barker teaches preparation of tribasic copper sulfate $[\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2]$ by adding cuprous oxide to $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ and aerating the suspension for 1 hour at room temperature, wherein the precipitate of tribasic copper sulfate comprises 56.4 wt.% cupric ion (Example III). Barker further teaches that the copper chemicals are suitable for use as fungicides (col. 1, ln. 11-14).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

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Barker does not explicitly disclose including the tribasic copper sulfate compound in a wettable powder formulation, wherein the copper content of the wettable powder is between 30 and 45 wt.%. However, Courtade et al. teach wettable powder compositions comprising 45.5-75.5 wt.% dry Bordeaux mixture in combination with synthetic fungicides, dispersing agents, wetting agents, anti-foaming agents, dyes and kaolin (Examples 3-5). Substituting the tribasic copper sulfate compounds of Barker in the place of the dry Bordeaux mixture in Examples 3-5 of Courtade et al. results in

Finding of *prima facie* obviousness

Rational and Motivation (MPEP 2142-43)

Therefore, it would have been *prima facie* obvious for one of ordinary skill in the art at the time of the invention to formulate the tribasic copper sulfate of Barker into wettable powders for application as a plant fungicide, wherein the wettable powders are prepared according to Courtade et al. with the tribasic copper sulfate of Barker substituted in the place of the dry Bordeaux mixture of Courtade et al. Substituting the tribasic copper sulfate compounds of Barker in the place of the dry Bordeaux mixture in Examples 3-5 of Courtade et al. results in wettable powders comprising $[\text{CuSO}_4 \cdot 3\text{Cu}(\text{OH})_2]$ wherein the copper content of the wettable powder is 25.7-42.5 wt.%.

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nathan W. Schlientz whose telephone number is 571-272-9924. The examiner can normally be reached on 8:30 AM to 5:00 PM, Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NWS

/John Pak/
Primary Examiner, Art Unit 1616